



Research on Normal Aging

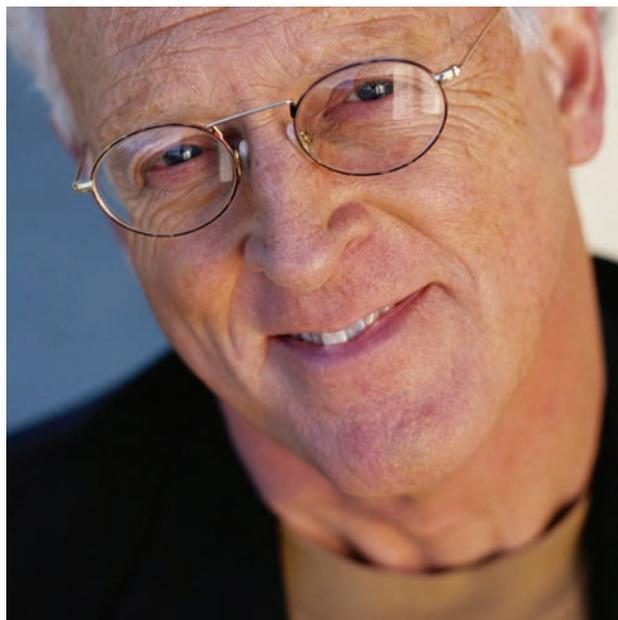
By George L. Maddox, PhD

Archival evidence indicates that as early as 1953, Bud Busse, the founding director of the Aging Center at Duke, had in mind the design of a pioneering multidisciplinary research on aging that he wanted to begin when he arrived from the University of Colorado Medical School. In 1951 he had begun research supported by the Public Health Service that explored normal and pathological changes in brain wave (EEG) patterns in children and adults. Noting that observed differences in brain waves were associated with socioeconomic background, he invited the observations of social and behavioral scientists to interpret findings. In 1953, just as he was moving to Duke University Medical Center as chair of the Department of Psychiatry, he submitted a proposal for multidisciplinary longitudinal research on EEG patterns of older adults living in the community that became the prototype of the Duke studies of normal aging that began in 1955.

Publications describing research design and initial findings from the new longitudinal study began to appear in the late 1950s, and the first of three volumes of collected publications with the title *Normal Aging* under the editorship of Erdman Palmore appeared in 1970. In the introduction to this initial volume, Busse describes in detail his plan for a multidisciplinary longitudinal study of aging. He outlined “a physiological, psychological, and sociological study of aging” and anticipated accurately the challenges of assembling, administering, and maintaining an interdisciplinary team of investigators and of recruiting and maintaining a reasonably representative sample of community dwelling subjects 60 years of age and older. Asking subjects to give two days each year and eight hours of testing would test their interest and loyalty. While the “snowball technique of purposive sampling” to be used had limitations, he felt that with frequent checks for indications of bias, maintaining the loyalty of a clearly described sample was the best available option. Although the only rewards of being a member of the Duke study were free medical examinations and public recognition of participation in a study that generated a lot of favorable publication at the time, retention of the original diverse panelists was favorable. In fact, interest in the Duke study of aging remained high. Participants talked with pride about being participants.

The first of the three edited volumes of *Normal Aging* (1970) includes reports by 31 authors, whose studies of this panel of older adults living in Durham, North Carolina, had been published between 1955 and 1970 in 31 journals or books. The topics of these articles are predictably multidisciplinary—EEG patterns and patterns of health and illness in later life, reaction time, intelligence, perception and effect, as well as family characteristics, perceived health, activities and satisfaction, and views of aging and death. “Two Thousand Years of Married Life,” a chapter that documents the then surprising information of sexual activity in later life, received considerable local and national attention. Similar articles appear five additional times in later volumes of *Normal Aging*. Research on issues of interest in geriatric medicine, e.g., innovative clinical studies of relationships among cerebral blood flow, cardiovascular functioning, and intelligence, that could not be easily incorporated into the panel study were designated as “ancillary studies.”

In the second edited volume of *Normal Aging* (1974), 27 authors with multidisciplinary research interests were published. Given Busse’s interest in encouraging career in research on aging, it is not surprising to find younger scholars and post-





aging well



differentiate aging effects from the effects of exposure to different historical circumstances, successive five-year cohorts of adults were followed longitudinally, and the socioeconomic context of their aging specified. The Duke Adaptation Study used this strategy to study a new sample of 502 men and women age 45 to 64 selected from the rolls of a large local health care organization in 1968 and retested them in 1972. Many of the questions and procedures used were comparable to those in the first longitudinal study, although some of the old examinations were dropped to make room for some new tests.

The third volume of *Normal Aging* (1985) was published in the 25th and final year of the Duke longitudinal studies of relatively healthy, typical older individuals aging in Durham. The 38 authors include a familiar cast of senior investigators but, as in volume II, the number

doctoral students among the authors. And the topics in this volume expectedly focus on age-related changes in health status reflecting changes in the immune system, skin, vision, and hearing. Reports on health practices in relation to obesity and cardiac function anticipated current interests in the effects of lifestyle on health and illness. Social roles reportedly continued to be adequate on average, and self-concepts tended to be positive in later life.

With 15 to 20 years of information about panel participants available, “predictors of longevity” appear in the titles of chapters as do predictors of “aging well.” Overall, aging well is best understood as not simply as absence of illness, but as maintenance of physical and intellectual capacities that interact favorably with opportunities for growth and development. A favorable interaction is described as the cumulative results of differential opportunities for health maintenance, adequate income, and the availability of a social support system when needed. The chances of aging well and living out one’s life in the community appear to be realistically optimistic.

An end note in the second volume of *Normal Aging* reports a second longitudinal study designed to improve the accuracy of forecasting the future of aging in the community. The Duke Adaptation Study followed the design of longitudinal research on aging recommended by Warner Schaie in 1965. In order to

of students and new junior faculty are more numerous and the names of individuals who were emerging as the new leaders of the Duke Center appear: Dan Blazer, Linda George, and Ilene Siegler. New topics include stress, coping, and successful aging, along with old standards such as EEG changes with age, predictors of longevity, locus of control, life satisfaction and life events, and risk of institutionalization.

On the 25th anniversary of the Duke Center, the publication in 1980 of *The Longitudinal Studies of Normal Aging, 1955–1980*, edited by Busse and Maddox and assisted by 12 colleagues in the Aging Center, marked the end of a distinctive era in the life of the Center. This edited volume provides a brief overview of the design and implementation of these two pioneering studies whose findings laid the basis for a realistically optimistic view of aging. Older adults are and remain extraordinarily varied. How they develop in adulthood and later life reflects the availability of health care, education, income, and available social support. Later life does produce some tough challenges. But for most older adults, evidence from the Duke Longitudinal Studies indicates that healthy lifestyles, the availability of social support from family and friends, adequate economic resources, and health care in later life make aging well both possible and probable. ■